



AirCred:

**An Interactive Tool for Calculating
*Emission Reduction Credits for Your Clean
Cities AFVs at the Click of a Mouse***

Chris Saricks

**Center for Transportation Research
Argonne National Laboratory**

**Presented at:
6th National Clean Cities Conference & Expo
San Diego, CA
May 9, 2000**

**Argonne National Laboratory
Transportation Technology R&D Center**



Why AirCred? Why Now?

- **Why not take emission reduction credits for the AFVs that private and municipal fleets have voluntarily acquired?**
- **AFV emission reduction benefits are being “lost” for official air quality compliance purposes**
- **Uses (and conservatively applies) an EPA-approved emission calculation procedure**
- **Accessible at the most basic level of calculation (i.e., the individual small fleet)**



Current Features

Provides calculated credits through the year 2000 ozone season for.

- electric light-duty vehicles
- dedicated and dual-fueled natural gas LDVs and LDTs,
- NG-fueled transit and school buses (replacing diesel buses), and also
- gives a placeholder credit for propane power



Features to be Added in the Near Term

- actual credits for both propane- and alcohol dedicated and dual (flex)-fueled vehicles
- credits for electric hybrids
- 24-hour and cold start credits for each Clean City through at least 2004
- medium-duty vehicle credits
- credits against Tier 2-certified gasoline and diesel vehicles

The model will be updated at least annually as new certification data for AFVs are obtained

Hello! Welcome to AirCred

Please click below on the location to assign VMEP credits for AFVs

Florida Space Coast
Genesee Region, NY
Hampton Roads, VA
Honolulu, HI
Houston, TX
Kansas City, KS-MO

Proceed



Select city from scroll-down menu

How many NEW AFVs of each of these types were delivered between July 1, 1998 and June 30, 1999...

..and what is your PLANNED total delivery from July 1, 1999 to June 30, 2000?

(Replace zeros below as applicable)

	1998-99	1999-2000		1998-99	1999-2000
Dedicated CNG light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	<input type="text" value="0"/>	Dedicated CNG automobiles	<input type="text" value="0"/>	<input type="text" value="0"/>
Dual-fueled CNG light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	<input type="text" value="0"/>	Dual-fueled CNG automobiles	<input type="text" value="0"/>	<input type="text" value="0"/>
LPG (propane)-fueled light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	<input type="text" value="0"/>	Natural gas school buses replacing gasoline buses	<input type="text" value="0"/>	<input type="text" value="0"/>
Natural gas-fueled full-size transit buses	<input type="text" value="0"/>	<input type="text" value="0"/>	Natural gas school buses replacing diesel buses	<input type="text" value="0"/>	<input type="text" value="0"/>
Electric light-duty trucks	<input type="text" value="0"/>	<input type="text" value="0"/>	Electric automobiles	<input type="text" value="0"/>	<input type="text" value="0"/>

Go Back

Print

OK

Report existing / planned local AFV inventory

And how many miles ON AVERAGE is EACH of these AFVs driven each day?

(Replace zeros below as applicable)

Dedicated CNG light trucks,
vans, and minivans in place of
gasoline counterparts

Dedicated CNG
automobiles

Dual-fueled CNG light trucks,
vans, and minivans in place of
gasoline counterparts

Dual-fueled CNG
automobiles

LPG (propane)-fueled light
trucks, vans, and minivans in
place of gasoline counterparts

Natural gas school buses
replacing gasoline buses

Natural gas-fueled
full-size transit buses

Natural gas school buses
replacing diesel buses

Electric light-duty trucks

Electric automobiles

Go Back

Print

OK

Provide average daily VMT by each AFV in fleet

**How many days per week, on average, is/was EACH of these AFVs
operated between May 1 and September 15?**

(Replace zeros below as applicable)

Dedicated CNG light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	Dedicated CNG automobiles	<input type="text" value="0"/>
Dual-fueled CNG light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	Dual-fueled CNG automobiles	<input type="text" value="0"/>
LPG (propane)-fueled light trucks, vans, and minivans in place of gasoline counterparts	<input type="text" value="0"/>	Natural gas school buses replacing gasoline buses	<input type="text" value="0"/>
Natural gas-fueled full-size transit buses	<input type="text" value="0"/>	Natural gas school buses replacing diesel buses	<input type="text" value="0"/>
Electric light-duty trucks	<input type="text" value="0"/>	Electric automobiles	<input type="text" value="0"/>

Go Back

Print

OK

Enter number of days per week average vehicle is actually driven

And what percentage (0-100) of the time does/did EACH AFV type operate on non-petroleum fuel?

(Replace zeros below, as applicable)

Dedicated CNG light trucks,
vans, and minivans in place
of gasoline counterparts

Dedicated CNG automobiles

Dual-fueled CNG light trucks,
vans, and minivans in place of
gasoline counterparts

Dual-fueled CNG automobiles

LPG (propane)-fueled light
trucks, vans, and minivans in
place of gasoline counterparts

Natural gas school buses
replacing gasoline buses

Natural gas-fueled
full-size transit buses

Natural gas school buses
replacing diesel buses

Electric light-duty trucks

Electric automobiles

Go Back

**Compute Total
Credits Now**

Compute Cold
Start Credits

Print

Enter average percentage of daily driving on alternative fuel

for Denver, CO

Your 1999 Credit for
Daily Non-Methane
Hydrocarbons
(NMHC) Reduced is:

Your 1999 Credit for
Daily Carbon
Monoxide (CO)
Reduced is:

Your 1999 Credit for
Daily Oxides of
Nitrogen (NOx)
Reduced is:

Attributable (pounds) to the following vehicle types in the amounts shown

Ded. Natural Gas Light Trucks	0.00	0.00	0.00
Dual-fuel Natural Gas Light Trucks	0.00	0.00	0.00
Ded. CNG Autos	0.00	0.00	0.00
Dual-fuel CNG Autos	0.00	0.00	0.00
Transit buses			0.00
School buses	0.00	0.00	0.00
LPG Lt.-Duty Trucks	0.00	0.00	0.00
Electric Light-Duty Trucks	0.00	0.00	0.00
Electric Autos	0.00	0.00	0.00

Tons = 0.000Tons = 0.000Tons = 0.000

0.00Pounds0.00Pounds0.00Pounds

View Estimated
Year 2000 Credits

Print This
Screen

Go Back

END

Results from most recent (past) summary will appear on this screen

Your Total Daily Credits in the Year 2000 Ozone Season Will Be

Tons**Pounds****NMHC****0.000****0.00****CO****0.000****0.00****NO_x****0.000****0.00**

Click to return to "Percent Operation as AFV"
screen, then click to display 1999 daily
(24-hour) credits and/or year 2000 cold start
credits

Print**Quit**

Results for upcoming summer will appear on this screen

Learn More About Voluntary Measures and Earning Credits at Upcoming Workshops

- **Co-sponsored by DOE Clean Cities and EPA's Office of Transportation and Air Quality (OTAQ)**
- **Tentatively planned this summer for Atlanta, New York City, Philadelphia, and Denver**
- **Will explore both vehicle- and fuel-oriented controls that can be credited against emission budgets now and could become part of the official implementation plan later (similar to investment seed money)**
- **Schedule will be posted on both Clean Cities (<http://www.ccities.doe.gov>) and OTAQ (<http://www.epa.gov/oms/transp/traqvolm.htm>) sites.**